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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/034,985

02/28/2002

Toru Nagara

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01/17/2003

William S. Frommer, Esq.
FROMMER LAWRENCE & HAUG LLP
745 Fifth Avenue
New York, NY 10151

EXAMINER

NGUYEN, TUAN N

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 01/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,985

Applicant(s)

NAGARA, TORU

Examiner

Tuan N Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.


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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-39 are rejected under 35 U.S.C 112, second paragraph, as being indefinite, vague, and confusing for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 35 recite, “a laser driving method for driving a laser light source for emission” and “a recording/reproducing method for casting a laser beam from a laser light source onto a recording medium to carry out recording and/or reproduction”, “ wherein *a first power-supply voltage* supplied to *a laser driving circuit* for *driving the laser light source* for emission is made higher *than a second power-supply voltage* supplied to *circuits* except the laser driving circuit.” The claims recite “a laser driving method”, however there is no steps in performing the method for driving the laser light source. It is not written in a means plus step functions – in which a single step is insufficient in performing “a laser driving method for driving a laser light source for emission or recording/reproducing method for casting a laser beam from a laser light source onto a recording medium to carry out recording and/or reproduction.” The “wherein...” contain many insufficient structure and relationships which render the claims indefinite. Refer to claim 17 and 26 for clarification. Claims 2-16, and 36-39 are rejected based on the same reasons.

Claims 14, 24, and 33 recite "... where in the case where the power of a driving pulse of the laser light source takes a plurality of values, the number of laser driving circuits supplied with the first power-supply voltage is made less than the number of control circuits for controlling the power of the plurality of values." The examiner do not understand what the claims claiming. The functional recitation has no structures or means and vague as to what is the "plurality of value"; what is the structural relationship between "the number of laser driving circuits with the first power-supply"?; and unclear to "is made less than the number of control circuits for controlling the power of the plurality of values." The claims are vague and indefinite, therefore it is not considered.

Claims 17 and 26 recite, "a laser driving device for driving a laser light source for emission" and "a recording/reproducing device for casting a laser beam from a laser light source onto a recording medium to carry out recording and/or reproduction", " wherein *a first power-supply voltage* supplied to *a laser driving circuit* for *driving the laser light source* for emission is made higher *than a second power-supply voltage* supplied *to circuits* except the laser driving circuit." The claims have no means for generating the first and second power supply voltage, and indefinite to laser light source. It is not clear as to what the "laser driving circuit" consisting of – optical or electrical circuitry use to drive "a laser generator" which produces "laser light source". It is indefinite as to *what circuits* the second light source is connecting to, while not connecting to the laser driving circuit or the laser generator. Claims 18-25 and 27-34 are rejected based on the same reasons.

Claim Rejections - 35 USC § 102

3. The following is a quotation of 35 U.S.C. 102(b) which forms the basis for all obviousness rejections set forth in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-4, 6-9, 12-13, 17, 19-20, 22-23, 26, 28-32, 35, and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Putt (US 4685097).

With respect to claims 1, 3, 4, 17, 19, 20, 26, 28, 29, 35, 37 and 38 Van der Putt ('097) discloses in the ABSTRACT power control system for a semiconductor in an optical recording system having both read and write capability, where write signal is higher power than read signal, and a light sensing diode used to control or adjusting the read and write current supplied to the laser. There is also a step-up comparator, that is used to determine if the output power from read or write is sufficient (Col 3: 0-15), capable of provide necessary voltage to the operating voltage for output. Since Write power is higher than Read power, it is inherent that as it sum of Read or Write with the Step-up comparator will provide a higher laser driving circuit. In addition, the system inherently need and have a record medium in-order to perform its read and write function. Since claims 1, and 35 recite the same or identical elements/limitations it is inherent to use patents ('097) to recite the method of driving a laser light source, product by process.

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With respect to claims 6, 13, 23, 30, 32 and 39, Van der Putt ('097) discloses in (Col 2: 40-69), first power supply decided on the operating voltage of read and write, by switch back and forth between Read and Write using diode feedback.

With respect to claims 7, 8, 9, 12, 22, and 31, Van der Putt ('097) discloses in (Col 3: 20-26) the circuit has memory function which remember the read write level when the system is shut-off, so it can restart the laser operation at the previous level state.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or non-obviousness.

6. Claims 2, 18, 27, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Putt (US 4685097) in view of Sonnenschein et al (US 4975358). Van der Putt ('097)

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discloses the above except that the laser light source is a violet short-wave laser beam. Sonnenschein et al. discloses the use of violet short-wave laser in write, read and erasable in optical data storage (Col 4: 13-18). It would have been obvious to one of ordinary skill in the art to provide Van der Putt (US 4685097) the element as taught or suggested by Sonnenschein et al (US 4975358) for the benefit of having sharply defined, high resolution images on optical media.

7. With respect to claims 10, and 11 Van der Putt ('097) discloses the above where system can restart the laser operation at the previous level state, after shut-off, except that the first power is set at Maximum and Minimum operating voltage. It would have been obvious to one of ordinary skill in the art to set the first power at Maximum or Minimum operating voltage, as a design choice, if the system can store and operate at the previous state after shut-off. It is well known that by starting system at previous or a optimal set state, the system can quickly achieve it predetermined value and has less overshoot.

8. Claims 15, 16, 25, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Putt (US 4685097) in view of Shinbori et al (US 6128040). Van der Putt ('097) discloses the above except auto-power shut-off in that as 1st power is off in a predetermined time, then the 2nd power to other circuit is also turn-off or when first laser light does not operate then supply to first power is stopped. Shinbori et al. ('040) discloses variable control of power supply uses in recording and reproducing apparatus where auto shut-off circuit is shutting down power source if an inoperative state continues for a predetermined time. It would have been obvious to one of

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ordinary skill in the art to provide Van der Putt (US 4685097) the element as taught or suggested by Shinbori et al (US 6128040) for the benefit of saving power and resource when system is not in used.

Citation of Pertinent References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It is cited primarily to show the product of the instant invention.

Hirikiri et al. (US005237558), Reece (US005438581A), Doi (US 4747091), Inaba et al. (US005477557A), Hikasa et al. (US005859862A), Kagamibashi et al. (US005508986A), Kawabuchi et al. (US005884122A), disclose laser driver circuit for optical disk recording and reproducing with auto shut-off.

Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (703) 605-0756. The examiner can normally be reached on M-F: 7:30 - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-8592 for regular communications and (703) 746-8592 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



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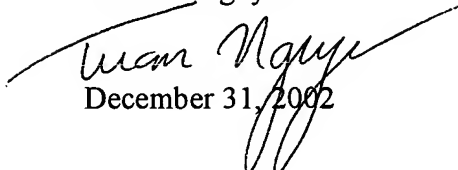
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Tuan N. Nguyen



December 31, 2002